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Financial Aspects of Municipal Growth

Most New England communities have experienced varying degrees of residential and/or industrial and commercial growth in the postwar period and will continue to do so. Rapid expansion has forced many communities to provide new facilities such as schools, roads, storm and sanitary sewers, and sewerage treatment plants. They have also had to bear the costs of increased welfare, health, police, fire, and recreation services. In meeting problems associated with growth, communities have often made hasty decisions or have been compelled to take action without benefit of needed factual information.

What are the economic effects on municipal costs and revenues of different types of residential and industrial development? What tax rates are needed on new properties to meet increased costs? Will growth lead to an increase or decrease in the over-all community tax rate? These questions are in the minds of most planning boards, mayors, selectmen, assessors, other municipal officials, and a large body of citizens concerned with civic affairs.

A procedure for estimating in advance the impact of different types of growth on local costs and income would greatly aid municipal officials in encouraging the

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types of development most suitable for their communities and in trying to channel such developments into areas where costs would be minimized and revenues maximized. It would also help in planning for additions to municipal facilities and services to meet added demands at the lowest cost to the community consistent with an acceptable level of service.

To help meet the need for additional analytical information providing guidance on how to attack these problems, this Federal Reserve Bank sponsored a study of community revenues and costs resulting from residential and industrial development. This article summarizes some of the major findings of the study and indicates the procedures followed[1]. The authors and the American Institute of Planners are publishing the complete study, which includes an extensive appendix outlining methods of estimating costs of additional municipal facilities and services needed to care for various types and patterns of residential and industrial development, and revenues generated by these developments[2].

Procedures Followed

In assembling and interpreting materials the authors avoided a case study approach because no two communities are alike. Communities differ in terms of position within a metropolitan complex, average income of residents, distribution of income among residents, ethnic composition, social group structure, cultural values, traditions, topography, settlement patterns, inherited physical structures, relation to major transport facilities, land values, commercial composition, industrial mix, labor skills and many other factors.

The method followed is designed to provide information useful to most communities. It investigates individual activities and functions which generate costs and revenues as a community grows. For example, the cost of constructing main roads is studied. For communities in situations where the state bears that cost, this item is not relevant. However, for a second group of communities which do bear the road cost and which are currently faced with traffic congestion, this item is extremely important. The analysis is not oriented to a specific community situation since the importance of each cost item varies with the community examined. Instead, a "building block" approach is followed. Each factor whose effects can be quantified is reported on in a systematic and orderly fashion.

This procedure leads to certain cost and revenue totals which have little direct counterpart to most existing community situations. But the objective is to provide building block data by which persons interested in a particular community can construct a set of relevant cost and revenue estimates after modifying the materials in the full report to reflect prices, labor costs, construction and material costs, tax policies, and other factors peculiar to a specific community. A set of instructions at the beginning of the appendix is designed to help readers ascertain the costs and revenues which are likely to result from various types of growth.

There are many types of growing residential communities which might be visualized as cases to which these empirical materials relate. These communities can be classified by such factors as density of settlement, general level of municipal services provided, income of families, position within a metropolitan area, existence of unused capacity in various municipal physical facilities, tax structures, social and ethnic character, and terrain. This analysis begins with a community to be developed from scratch on raw land bordering a settled area. The existing settled area is visualized as having a population of somewhat over 25,000 persons. The new area is projected to be completely developed within 20 years. It grows at the rate of 620 dwelling units every five years, and in 20 years consists of 2,480 dwelling units (housing about 8,700 people) in addition to a typical set of local commercial, educational, and other community facilities. Rational planning from the start is assumed. Construction of facilities in excess of service requirements is avoided, unless such construction is economic in the long run.

Research quickly indicated a noticeable variation in municipal costs due to differences in density of new residential growth. Accordingly, the material is presented for three densities of residential settlement: 1 dwelling unit, 4 dwelling units, and 16 dwelling units per acre. The first of these densities is typical of acre-lot developments in medium-sized towns and the last, of row-house developments.

[1]The study was conducted by Walter Isard, director, and Robert E. Coughlin, research assistant, urban and regional studies section, Department of City and Regional Planning, Massachusetts Institute of Technology.

[2]Parts of this study are forthcoming in the *Journal of the American Institute of Planners,* VOL. XXII, Summer and Fall, 1956.

The level of services a community chooses to provide also has a major effect on costs. Therefore, materials are presented for three levels of service: high, medium and low.

The U. S. Census classification of municipal costs is used. This breaks down total costs into those for schools, public welfare, highway, fire protection, police protection, sanitation, health and hospital, general control of government, recreation, library, general public building, and "other" services. The first six categories of costs receive most attention in the complete study because they comprised in 1953 some 80% of municipal expenditures of Massachusetts cities and towns of 25,000-50,000 population.

The local government is treated as a firm which must balance costs against revenues. Social and psychic costs and incomes are not investigated although in certain cases they can be the most significant ones. Unfortunately, they defy even rough measurement. Private development costs normally included in residential construction are not included as municipal costs. The full costs of constructing necessary roads, schools, and sewers are assigned to a community even though a sizable fraction of these costs may be met by federal, state, and county tax revenues turned over to the local government.

Estimating Revenues

Coupled with costs are revenues. To derive estimates of the value of residential property and subsequently its potential yield of revenue, it is first necessary to have knowledge of the income of a community's residents by income classes and of the amount which these residents can be expected to spend on housing. This analysis considers three levels of average personal income, high, medium, and low, as may be found in such Massachusetts communities as Newton ($8,420 average income after taxes per dwelling unit in 1954), Waltham ($5,320), and Taunton ($4,690).

Income distribution data and materials relating disposable income by income group to outlays on housing lead to a crude estimate of $26,940,000 for the value of new residential property in our medium-income community in year 20. The over-all capital valuation of commercial structures in a medium-income community is estimated to be $2,415,400. Therefore, total property valuation (residential and commercial) is $29,355,400 for a medium-income community. Corresponding figures for high-income communities are $42,935,000, and for low-income communities, total property valuation is estimated at $26,790,000.

Having estimated total property valuation in the hypothetical new communities, revenues, at least in large part, can be approximated. This approximation is based upon property tax rates, current assessments, and other sources of current revenues which characterize municipal operations in the United States. To derive a generalized procedure for estimating revenue potentials, "revenue rates" are constructed. These revenue rates were determined for each of 90 cities in 1952 by adjusting property rates to apply to 100 per cent of current market value of property, and by taking account of county and state taxes turned over to communities and other sources of community income. In effect, they are the rates necessary if all revenues were to come from a tax on property.

When the resulting revenue rates were examined, it was found that the large majority of them ranged between 20 and 60 mills. Therefore, three sets of rates (20, 40, and 60 mills) are used for calculations. Expected revenues from the application of typical existing revenue rates are computed for the last year of each five-year period, and resulting surpluses and deficits are noted.

For each cost item and each general type of revenue potential situation encountered by expanding communities, details are presented in the complete study. This article merely summarizes total cost and revenue estimates and only at the end of a five-year period. The full study also presents estimates at the end of 10, 15, and 20 years.

The various cost and revenue data pertaining to the designed communities are summarized in Table 1 for year 5. High-, medium-, and low-density communities, inhabited by residents with high, medium, and low incomes and providing high, medium, and low levels of community services, are considered. Total annual costs, including both annual costs of capital outlays (based on current financing procedures) and operating and maintenance costs, are listed in column 1. Revenue yields, when revenue rates of 20, 40, and 60 mills are applied to the relevant property values, are listed in columns 2, 3, and 4. Columns 5, 6 and 7 record estimated deficits (−) and surpluses (+) for the three sets of revenue rates. Column 8 records the revenue rate which

Copies of the complete study "Municipal Costs and Revenues Resulting From Growth" may be obtained from the American Institute of Planners, 34 Brattle Street, Cambridge, Massachusetts.

would be required to meet community costs and maintain the community in financial balance. This last rate is the most important one, of course, in terms of planning future community development.

Table 2 helps interpret the significance of the several revenue rates used in this discussion. This table converts selected revenue rates into equivalent property tax rates under different assumptions regarding the per cent of property valuation which is assessed for taxation purposes as well as the per cent of local revenue which is derived from the property tax. For example, a revenue rate of 40 mills is equivalent to a property tax rate of 35 mills when a community assesses its property at 75 per cent of its value and obtains 65 per cent of its revenues from the property tax.

Conclusions for Residential Communities

Examination of Table 1 indicates that no type of new residential area can meet costs with a 20-mill revenue rate. (See column 5.) Furthermore, low- and medium-income growing residential communities cannot balance their books even with a 40-mill revenue rate. (See column 6.) Some types of low-income new communities may have difficulty in meeting costs even with a 60-mill revenue rate. (See column 7.)

These conclusions are also apparent from an examination of column 8 which records revenue rates required to meet costs. Even with the provision of a low level of service, new communities with low income must have a revenue rate in the 50's. Only certain types of high-income communities can achieve balance with rates in the 30's.

Proceeding from high-income to medium-income and finally to low-income communities, the required revenue rate rises for every combination of service and density of settlement. Higher residential valuations are associated with higher incomes, and hence for a given residential density and level of service, the corresponding required revenue rate is lower.

Another relation is apparent. Under any combination of income level and level of service, the required revenue rate rises proceeding from

Table 1

COSTS AND REVENUES OF NEW RESIDENTIAL DEVELOPMENT

Total costs, revenues, and revenue rates required for financial balance in fifth year, by density of development, level of service, and income level of community.

Residential Sector Characteristics	Total Annual Costs (1)	Total Annual Revenue			Deficit or Surplus			Required Revenue Rate (mills) (8)
		20 mills (2)	40 mills (3)	60 mills (4)	20 mills (5)	40 mills (6)	60 mills (7)	
HIGH LEVEL OF SERVICE								
Low Density Community								
High Income	$436,100	$214,700	$429,400	$644,100	−$221,400	−$ 6,700	+$208,000	41
Medium Income	437,330	146,700	293,400	440,100	− 290,630	− 143,930	+ 2,770	60
Low Income	465,660	133,900	267,800	401,700	− 331,760	− 197,860	− 63,960	70
Medium Density Community								
High Income	461,620	214,700	429,400	644,100	− 246,920	− 32,220	+ 182,480	43
Medium Income	462,850	146,700	293,400	440,100	− 316,150	− 169,450	− 22,750	63
Low Income	491,180	133,900	267,800	401,700	− 357,280	− 223,380	− 89,480	73
High Density Community								
High Income	415,110	214,700	429,400	644,100	− 200,410	+ 14,290	+ 228,990	39
Medium Income	416,340	146,700	293,400	440,100	− 269,640	− 122,940	+ 23,760	57
Low Income	444,670	133,900	267,800	401,700	− 310,770	− 176,870	− 42,970	66
MEDIUM LEVEL OF SERVICE								
Low Density Community								
High Income	386,280	214,700	429,400	644,100	− 171,580	+ 43,120	+ 257,820	36
Medium Income	387,610	146,700	293,400	440,100	− 240,900	− 94,210	+ 52,490	53
Low Income	415,960	133,900	267,800	401,700	− 282,060	− 148,160	− 14,260	62
Medium Density Community								
High Income	411,800	214,700	429,400	644,100	− 197,100	+ 17,600	+ 232,300	38
Medium Income	413,130	146,700	293,400	440,100	− 266,430	− 119,730	+ 269,750	56
Low Income	441,480	133,900	267,800	401,700	− 307,580	− 173,680	− 39,780	66
High Density Community								
High Income	365,290	214,700	429,400	644,100	− 150,590	+ 64,110	+ 278,810	34
Medium Income	366,620	146,700	293,400	440,100	− 219,920	− 73,220	+ 73,480	50
Low Income	394,970	133,900	267,800	401,700	− 261,070	− 127,170	+ 6,730	59
LOW LEVEL OF SERVICE								
Low Density Community								
High Income	336,950	214,700	429,400	644,100	− 122,250	+ 92,450	+ 307,150	31
Medium Income	338,400	146,700	293,400	440,100	− 191,700	− 45,000	+ 101,700	46
Low Income	366,760	133,900	267,800	401,700	− 232,860	− 98,960	+ 34,940	55
Medium Density Community								
High Income	362,470	214,700	429,400	644,100	− 147,770	+ 66,930	+ 281,630	34
Medium Income	363,920	146,700	293,400	440,100	− 217,220	− 70,520	+ 76,180	50
Low Income	392,280	133,900	267,800	401,700	− 258,380	− 174,480	+ 9,420	59
High Density Community								
High Income	315,960	214,700	429,400	644,100	− 101,260	+ 113,440	+ 328,140	29
Medium Income	317,410	146,700	293,400	440,100	− 170,710	− 24,010	+ 122,690	43
Low Income	345,770	133,900	267,800	401,700	− 211,870	− 77,970	+ 55,930	52

a high-density community to a medium-density community. This stems from the associated increase in requirements for roads, sidewalks, and sewers. In contrast, going from a medium-density community to a low-density community, the rate falls for any combination of income level and level of service. This reverse effect reflects among others the facts that in a low-density community each residence has its own sewage disposal facilities and requirements for sidewalks and curbs are less in a low-density community than in a medium-density community. This tax rate advantage which a low-density community has over a medium-density community is to some extent fictitious, however, since the private owner bears certain costs directly rather than indirectly through his local government.

Rates required to achieve economic balance for the different types of communities, 10, 15, and 20 years in the future (contained in the full study) are less than the corresponding rates in column 8 of Table 1. For example, the required rates for year 20 are from 3-9 mills less. The lower set of rates in the future tends to reflect two facts: The physical facilities of the community are more fully utilized 10 to 20 years in the future than they are five years in the future; hence economies are experienced because costs are spread over many more residential units. Secondly, certain facilities such as roads and sidewalks constructed in the early years have been partly or completely paid for by later years.

Still other interesting relations are present in the data of Table 1. The variation in total costs due to the variation in the density of development ranges up to 15 per cent of total costs. The variation due to level of service ranges up to about 30 per cent. Finally, the variation in total revenue due to differences in income level is approximately 60 per cent. These figures at least suggest the tax rate advantage of higher-income communities even when they provide a higher level of service.

Effects of Industrial Development

Up to this point, only residential growth has been considered. How does industrial development affect community costs and tax rates required to meet these costs? To help answer this question, attention is now shifted to communities experiencing industrial as well as residential growth. Procedures similar to those used for residential communities are followed.

There are many possible combinations of industrial requirements, valuations, and induced commercial valuations associated with industrial

Table 2
CONVERSION TABLE

Revenue rates and corresponding property tax rates. (In Mills)

Revenue Rate	PROPERTY TAX RATES								
	50% Assessment			75% Assessment			100% Assessment		
	Property Tax as Per Cent of Total Revenue			Property Tax as Per Cent of Total Revenue			Property Tax as Per Cent of Total Revenue		
	50%	65%	80%	50%	65%	80%	50%	65%	80%
20	20	26	32	13	17	21	10	13	16
30	30	39	48	20	26	32	15	20	24
40	40	52	65	27	35	43	20	26	32
50	50	65	80	33	43	53	25	33	40
60	60	78	96	40	52	64	30	39	48
70	70	91	112	47	61	75	35	46	56

growth. To reduce the problem to manageable proportions, industry types that give rise to three situations designated A, B, and C are considered for three sizes of industrial district. Type A refers to a situation in which industrial sewerage requirements and outlays are high, capital investment per worker is low ($5,000), and nonresident workers make no purchases in the community and induce no increase in commercial valuations.

Type B describes a situation in which sewerage requirements and costs are moderate, capital investment per worker is medium ($7,000 per worker), expenditures in the community of nonresident workers are five per cent of their incomes (which average $3,350 after taxes), and nonresident workers constitute 90 per cent of total industrial employees in year 5 and 65 per cent in year 20.

Type C relates to a situation in which sewerage requirements and costs are low, valuations are high ($9,000 per worker), expenditures in the community of nonresidents constitute ten per cent of their income, and all the industrial labor force is composed of nonresidents whose incomes after taxes average $3,800. Thus, situation A is the least favorable one for any community's financial position; situation C the most favorable; and situation B, an intermediate one.

Table 3 presents for industrial situations A, B, and C relevant costs, valuation, and revenue rate estimates for a large industrial development (400 workers) within the different types of residential communities previously described.

Columns 1, 4, and 7 refer to total annual costs including all costs of the residential sector. By selected levels of municipal services these total costs are presented for high, medium, and low levels of community income and in each case for high, medium, and low residential density.

Columns 2, 5, and 8 record total taxable property valuations including the entire residential and commercial sector. In the derivation of these total valuations it was recognized that commu-

Table 3

EFFECTS OF TYPE OF NEW INDUSTRY

Total annual costs, taxable property valuation, and revenue rates (in mills) required for financial balance in fifth year in community with large industrial district (400 workers).

Residential Sector Characteristics	TYPE A*			TYPE B*			TYPE C*		
	Annual Total Costs (1)	Taxable† Valuations (2)	Revenue Rate (3)	Annual Total Costs (4)	Taxable† Valuations (5)	Revenue Rate (6)	Annual Total Costs (7)	Taxable† Valuations (8)	Revenue Rate (9)
HIGH INCOME									
High Level Service									
Low Density	$468,170	$11,533,750	41	$457,960	$11,876,750	39	$454,080	$12,230,750	37
Medium Density	491,960		43	481,850		41	477,900		39
High Density	445,780		39	435,670		37	431,720		35
Medium Level Service									
Low Density	418,350		36	407,860		34	404,260		33
Medium Density	442,140		38	432,030		36	428,080		35
High Density	395,960		34	385,850		33	381,900		31
MEDIUM INCOME									
High Level Service									
Low Density	469,400	8,138,850	58	459,190	8,481,850	54	455,310	8,835,850	51
Medium Density	493,190		61	483,080		57	479,130		54
High Density	447,010		55	436,900		51	432,950		49
Medium Level Service									
Low Density	419,680		52	409,470		48	405,590		46
Medium Density	443,470		54	433,360		51	429,410		48
High Density	397,290		49	387,180		46	383,230		43
LOW INCOME									
Medium Level Service									
Low Density	448,030	7,497,500	60	437,820	7,840,500	56	433,940	8,194,000	53
Medium Density	471,820		63	461,710		59	457,760		56
High Density	425,640		57	415,530		53	411,580		50
Low Level Service									
Low Density	398,830		53	388,620		50	384,740		47
Medium Density	422,620		56	412,510		53	408,560		50
High Density	376,440		50	366,330		47	362,380		44

*See text for description of Industry Types A, B, and C.

†Total taxable valuation of industrial, commercial and residential property in fifth year. (Industrial property valued at 40 per cent of market value of plant and equipment.)

nities in New England, as in most regions, vary in their definitions of taxable industrial property. Plant cost constitutes roughly 40 per cent of total investment for industries that might develop in New England, so 40 per cent is taken as the lower limit of the per cent of total industrial valuation which is taxable when assessed at 100 per cent. This lower limit is used in Table 3.

Columns 3, 6, and 9 of Table 3 refer to the revenue rates required for the community to maintain financial balance in year 5. These rates indicate certain important relations. First, communities with a large industrial development of type C require revenue rates which are from 1-3 mills less than those required by communities with comparable development of type B, and from 3-7 mills less than those required by communities with comparable development of type A. This reflects the obvious fact that the type C development was designed to yield the largest surplus of revenue over costs.

Second, the impact on rates of these types of industrial development is greatest upon communities which are low-income with medium-level-of-service, and medium-income with high-level-of-service. (Compare tables 1 and 3.) In such communities revenue obtainable from industry is of greater relative importance than in other communities which have a larger taxable base, face lower costs, or both. Rates required by the high-income communities vary by only 3-4 mills with type of district while in low-income with medium-level-of-service and medium-income with high-level-of-service communities they vary by as much as 7 mills.

Another important variable is size of industrial development, as already indicated. To point up the significance of this variable, Table 4 presents revenue rates for communities which are wholly residential and for comparable communities which possess small (60 worker) medium (200 worker) and large (400 worker) industrial developments.

The data of Table 4 suggest that the introduction of a small industrial development, regardless of its type, has little effect on the revenue rate of communities of the size and type visualized. The reduction of the revenue rate tends to be at most one mill for high-income communities, and 2 mills for medium- and low-income communities. The introduction of a medium-size industrial district can reduce the tax rate of high-income communities by as much as 2 mills, and of medium- and low-income communities by as much as 5 mills. Finally, the introduction of a large industrial district can reduce the rate of a high-income community by

as much as 4 mills, and of medium- and low-income communities by as much as 9-10 mills.

Table 4 also indicates that when a large industrial district of type C is added to a high-income community, the community can provide a high level of municipal service with a rate only one mill greater than the rate required for a medium level of service when no industry is present. Alternatively, the community can provide a medium level of service with a rate 3 mills less than the rate required if the community were wholly residential.

Medium-income communities with large type C districts can provide a high level of service with a rate 1-2 mills less than the rate required for medium service when no industry is present. A low-income community with a large type C industrial district could provide a medium level of service and charge a rate 2-3 mills below what it would have to charge to provide a low level of service were it wholly residential.

Hitherto, it has been assumed that only 40 per cent of the value of industrial property is taxed. What would be the several impacts if a greater percentage were taxed? The data of Table 5 help answer this question. Situations are examined where 70 per cent and 100 per cent of the value of industrial plant and equipment are taxable. They are contrasted with those where only 40 per cent of the same value is taxed, and where no industry exists.

In general, taxing industrial property at a higher proportion of its value leads to a significant reduction in revenue rates required for financial balance. For example, for the high-income, high-level-of-service community with a large type A industrial development, the required revenue rate falls from 43 to 38 mills when the per cent of industrial property taxable rises from 40 per cent to 100 per cent (see column 1 of Table 5). The most extreme reduction recorded in Table 5 is for the low-income, medium-level-of-service community with large type C development. There the required rate drops from 56 to 44 mills when the per cent of industrial property taxed increases from 40 to 100. This 44-mill rate contrasts with the 66-mill rate which would be applicable for the same community were no industry present.

The rates thus far considered are revenue rates. Table 2 converted several revenue rates into relevant property tax rates under various assumptions with respect to per cent at which property is assessed and per cent of a community's income obtained from the property tax. Assuming that all property is assessed at 50 per cent of its taxable value and that the property tax provides 65 per cent of the community income, the revenue rates in columns 1-4 of Table 5 are equivalent to the property tax rates

Table 4

EFFECTS OF SIZE OF NEW INDUSTRY

Revenue rates required for financial balance in 5th year. (In Mills)*

Residential Sector Characteristics	No Industrial Development	SMALL INDUSTRIAL DISTRICT (60 workers)			MEDIUM INDUSTRIAL DISTRICT (200 workers)			LARGE INDUSTRIAL DISTRICT (400 workers)		
		TYPE A	TYPE B	TYPE C	TYPE A	TYPE B	TYPE C	TYPE A	TYPE B	TYPE C
HIGH INCOME										
High Level Service										
Low Density	41	41	40	40	41	40	39	41	39	37
Medium Density	43	43	42	42	43	42	41	43	41	39
High Density	39	39	38	38	39	38	37	39	37	35
Medium Level Service										
Low Density	36	36	36	35	36	35	35	36	34	33
Medium Density	38	38	38	38	39	37	37	38	36	35
High Density	34	34	34	33	34	33	33	34	33	31
MEDIUM INCOME										
High Level Service										
Low Density	60	59	58	58	59	57	55	58	54	51
Medium Density	63	62	62	61	62	60	58	61	57	54
High Density	57	56	56	55	56	54	53	55	51	49
Medium Level Service										
Low Density	53	52	52	51	52	51	49	52	48	46
Medium Density	56	56	55	55	56	54	52	54	51	48
High Density	50	49	49	49	50	48	47	49	46	43
LOW INCOME										
Medium Level Service										
Low Density	62	61	61	60	61	59	57	60	56	53
Medium Density	66	65	65	64	65	62	61	63	59	56
High Density	59	58	58	57	59	56	55	57	53	50
Low Level Service										
Low Density	55	54	54	53	54	52	51	53	50	47
Medium Density	59	58	57	57	58	56	54	56	53	50
High Density	52	51	51	50	51	49	48	50	47	44

*Industrial property valued at 40 per cent of market value of plant and equipment.

in columns 5-8. Perusal of columns 5-8 clearly indicates the importance of industrial development for maintaining reasonable property tax rates. This importance is most evident for low-income communities as suggested by Table 5.

Summary

The findings of this study suggest several conclusions. In communities which are primarily residential, tax rates are found to vary most because of differences in potential municipal revenues. Among communities, the income of residents as it affects property valuations is the basic factor which leads to the wide variation in potential revenues.

Tax rates of residential communities also vary because of differences in levels of municipal costs. But variations in municipal costs, though quite significant, do not lead to as great variation in required tax rates as do variations in potential revenues. The variations in municipal costs arise from differences in the level of municipal services provided and, to a lesser extent, from differences in density and patterns of development.

The additional municipal revenues generated by a new industry frequently exceed considerably the additional municipal costs. When they do, new industry tends to lower the tax rate. This tax advantage may vary widely for an industrial district of any given size, however, depending on its requirements for sewerage and other facilities, its property valuations, and the local purchases of the industrial employees. Other things being equal, the larger the industrial development, the greater the relief in community taxes. When industrial development is accompanied by residential development, however, tax rates may either rise or fall depending upon the number of new residents and their incomes, the magnitude of the new industrial and commercial valuations, the levels of municipal services provided, the amount of unused capacity in the existing municipal structure and other factors.

A Word of Caution

A comprehensive set of cost and revenue situations was developed to reach these conclusions. A set of instructions by which these materials may be related to the financial problems of any given local situation is presented in the full study. But readers are cautioned to use these conclusions and materials with considerable care. They should use the materials developed as benchmarks only, and modify the procedures and conclusions of this report in the light of the specifics of local situations.

Table 5

EFFECTS OF VALUING NEW INDUSTRIAL PROPERTY AT DIFFERENT LEVELS

Revenue rates and corresponding property tax rates required for financial balance in fifth year. (In Mills)

Industrial Situation	REQUIRED REVENUE RATES IN COMMUNITY WITH:				PROPERTY TAX RATE* IN COMMUNITY WITH:			
	High Income High Level Service	Medium Income High Level Service	Medium Income Medium Level Service	Low Income Medium Level Service	High Income High Level Service	Medium Income High Level Service	Medium Income Medium Level Service	Low Income Medium Level Service
WITHOUT INDUSTRY	43	63	56	66	56	82	73	86
WITH INDUSTRY								
40 per cent of Industrial Valuation Taxable								
Small Development								
Type A	43	62	56	65	56	81	73	84
Type C	42	61	55	64	55	79	71	83
Large Development								
Type A	43	61	54	63	56	79	70	82
Type C	39	54	48	56	51	70	62	73
70 per cent of Industrial Valuation Taxable								
Small Development								
Type A	42	62	55	64	55	81	71	83
Type C	41	60	54	62	53	78	70	80
Large Development								
Type A	40	56	51	58	52	73	66	75
Type C	36	48	43	49	47	62	56	64
100 per cent of Industrial Valuation Taxable								
Small Development								
Type A	42	61	54	64	55	79	70	83
Type C	41	59	53	61	53	77	69	79
Large Development								
Type A	38	53	47	54	49	69	61	70
Type C	33	43	39	44	43	56	51	57

*Property assessed at 50 per cent valuation; 65 per cent of community income provided by property tax.

Department Store Sales Rising

New England's department stores set a new record volume of sales during the first half of 1956, exceeding by two per cent the previous high set in the corresponding period last year. The gain in sales reflects the high level of economic activity in the region. Nonfarm employment in New England has risen steadily since January, and in June was three per cent greater than in June 1955. Unemployment has headed downward this year. By June, insured unemployment was 21 per cent less than a year ago. These changes, together with wage adjustments, maintained average weekly earnings of the region's workers at high levels.

The record volume of department store sales in the first half of the year was achieved in spite of weather that frequently made shopping unpleasant and, in particular, hurt the Easter selling season. Sales in May and June, however, ran well above year-earlier levels. After seasonal adjustments, June sales were at the highest point so far this year, and about two per cent above the average for the year 1955.

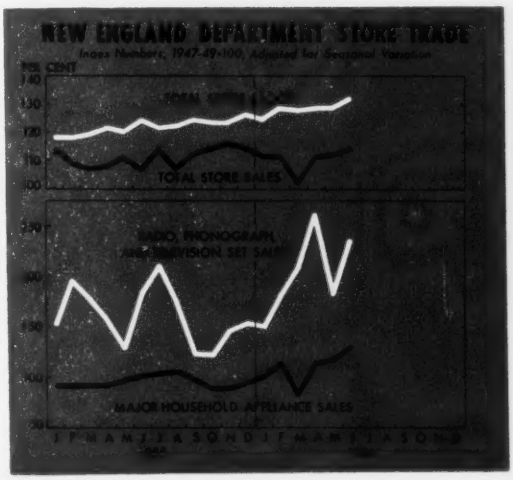
In only three of the ten district cities for which figures are available did department store sales fail to equal or better the year-ago sales volume for the first six months of the year. These were downtown Boston and Lowell, off one per cent and Providence, off two per cent. Stores in suburban Boston continued to ring up ever-increasing sales, the gain for the period being four per cent. Largest gains were made in Worcester and in Springfield. Among the states, sales in Vermont showed the greatest increase, reflecting largely the much improved employment situation there this year.

Year-to-year gains in sales during the first half of 1956 were not uniformly distributed among the departments of the reporting stores. Apparel sales did not equal last year's volume, in part due to the difficulties of the Easter season and in part to cool weather during the spring. The home furnishings group of departments exceeded last year's sales volume, particularly in sales of the major household appliances and the radios, phonographs and television sets departments. Both of the departments have shown almost uninterrupted uptrends since the beginning of the year, after allowance for seasonal variation. Other departments of the stores having better-than-average sales gains from year ago levels were household textiles, silverware and jewelry, toilet articles and drug sundries, stationery, sporting goods and cameras, luggage, and candy. Basement store departments generally failed to match year-earlier sales levels.

Department store inventories, although in near-record volume at the end of June, do not appear excessive in comparison with the current level of sales. The ratio of stocks to sales for June, on a total store basis, is very close to the average for June of the previous four years. Inventories for some departments, however, may well be high in view of their current level of sales. The region's department store merchants apparently expect a continuation of good sales volume since their outstanding orders for merchandise at the end of June exceeded those a year ago by seven per cent.

The continued popularity of revolving credit accounts, and the use of instalment contracts to purchase household appliances, television sets, and other big ticket items account for the greater gains made in instalment sales than in cash and charge sales so far this year. Repayments on instalment accounts were good; collection ratios on these accounts were equal to or above last year's level, while charge account collection ratios lagged occasionally this year.

Despite a poor Easter selling season and record sales volumes last year, New England's department store merchants rang up small sales gains in the first half of 1956. In the last half of the year, they will be setting their sales figures against the high level obtained in late 1955. The current high levels of employment and income seem to favor their chances of exceeding last year's figures, barring unfavorable shopping weather during the important fall and Christmas selling seasons.


NEW ENGLAND DEPARTMENT STORE TRADE
Index Numbers, 1947-49=100, Adjusted for Seasonal Variation
PER CENT
TOTAL STORE SALES
RADIO, PHONOGRAPH AND TELEVISION SET SALES
MAJOR HOUSEHOLD APPLIANCE SALES
J F M A M J J A S O N D J F M A M J J A S O N D

Earnings and Expenses—New England Member Banks

Bank earnings and asset shifts in the first six months of 1956 reflected financial trends in the region and nation. Continuing strong demands for credit by businesses and other sectors tended to raise interest rates. Confronted with a policy of monetary restraint, banks strove to meet the growing demands for credit by making adjustments in asset structures.

Almost all categories of operating earnings of First District member banks were larger in the first six months of this year than in the same period last year and total earnings were up 22 per cent in Boston and 13 per cent outside. Compared to the second half of last year the percentage rises were more moderate. Earnings increases resulted from higher interest rates, from shifts to higher yielding assets, and from a larger volume of trust and deposit service fees. All categories of expense also rose, but total expenses rose less than gross earnings and net operating earnings were up substantially from a year ago.

Although noncurrent charges and income taxes were markedly higher than in the first half of 1955, net profits increased fairly sharply. Net profits to capital accounts in the District averaged 7.0 per cent on an annual basis compared to about 6.6 per cent a year earlier.

Income received on securities reflected the changes which occurred during the past twelve months in interest rates and District member bank asset structures. Although security holdings of Boston banks declined 20 per cent from a year ago, higher yields on these assets kept the decline in security interest income to five per cent. Similarly at other District member banks, although security holdings were down five per cent, interest income from them rose six per cent. While a large portion of U. S. Government security holdings were longer-term, banks converted their portfolios to secure higher yields by selling, taking a capital loss, and then repurchasing at lower prices. Many of these adjustments were made late last year so that earnings rates were up over a year ago.

Interest received on loans showed the combined effect of increased rates and larger volume. Interest received on loans in the first half of 1956 increased 32 per cent over a year ago in Boston and 17 per cent outside. Total loans rose 15 per cent at Boston member banks in the twelve months to June 30, 1956, and 13 per cent outside Boston. Average returns on loans rose more at Boston banks, partly because they have a larger proportion of the lower-yielding large business loans which generally show the most marked rate increases during periods of reduced credit availability.

Salaries and wages in the first six months of 1956 were about 12 per cent higher than a year earlier at both Boston and outside banks. This percentage rise was greater than in recent years. It was accounted for about equally by increased bank employment and by higher pay schedules.

Net current earnings rose at both Boston and outside banks in the first half of 1956 over the year earlier level. The rise in Boston was especially sharp, but outside banks also experienced a large percentage increase. *Noncurrent transactions,* consisting of net gains or losses on security sales and purchases, and of net transfers to bad debt reserves, resulted in substantially larger charges than a year ago. Transfers to bad debt reserves accounted for most of the rise. These transfers rose as a result of more rapid growth of loans this year and liberalization of methods of computing reserve ceilings for tax purposes. Both *net profits* and *dividends* rose. Dividends were about 50 per cent of net profits.

MEMBER BANKS EARNINGS, EXPENSES AND PROFITS
(Amounts in Thousands of Dollars)

	Boston		Other First District Banks	
	First Half of 1956	% Change from First Half of 1955	First Half of 1956	% Change from First Half of 1955
Earnings	**53,197**	**+22.1**	**95,681**	**+13.2**
Interest received on bonds and stocks	8,180	− 5.1	20,787	+ 6.3
Interest received on discounts and loans	31,067	+32.1	56,572	+17.2
Service charges on deposit accounts	1,523	+ 6.9	7,154	+11.4
Trust department	6,672	+18.4	5,714	+11.6
All other income	5,755	+31.9	5,454	+ 4.9
Expenses	**27,742**	**+11.5**	**63,009**	**+11.8**
Salaries and wages	15,354	+11.6	29,835	+11.7
Interest paid on time deposits	1,155	+40.3	8,936	+13.2
All other expenses	11,233	+ 9.1	24,238	+11.4
Net current earnings	**25,455**	**+36.2**	**32,672**	**+15.9**
Non-current transactions	− 3,011	+85.1	− 6,876	+65.1
Profits before income taxes	22,444	+31.5	25,796	+ 7.4
Taxes on income	11,340	+46.4	11,754	− 0.2
Net profits	**11,104**	**+19.2**	**14,042**	**+14.7**
Cash dividends on common stock	5,539	+ 5.5	7,032	+ 6.2

Changes in Principal Earning Assets

While total asset levels of District member banks changed little in the twelve months to June 30, significant changes occurred in asset structures. Loans expanded steadily during the entire period, while security holdings declined, especially since December 31.

Business loans—Almost all industrial categories shared in the loan growth. Largest gains were posted by metals, chemicals and rubber, trade

and textiles. Public utilities showed the only decline. Sales finance company borrowings were heavy in the second half of last year, but net reductions occurred in the first half of 1956.

Real estate loans—Loans secured by mortgages increased at a fairly substantial rate in the year ending June 30, 1956, but the proportion of real estate to total loans declined slightly. Almost the entire increase was in conventional mortgages on residences and loans secured by commercial business properties.

Consumer loans—All categories of consumer loans showed increases, with automobile instalment paper accounting for the largest amount, as is usual. Of the $50 million rise in automobile credit since June 1955, about $30 million occurred in the first half of 1956. The District increase a year ago totaled $40 million. Other retail instalment paper declined slightly in the District the second half of last year, then increased rather substantially to June of this year.

Investments—To accommodate the loan increases of the past twelve months, District banks reduced security holdings sharply. Most of the dollar decline was accounted for by U. S. Government securities during the first half of 1956. Boston banks, however, reduced holdings of other securities, mainly obligations of state and local governments, quite heavily in the June to December period last year.

MEMBER BANK STATEMENT OF CONDITION
(Amounts in Thousands of Dollars)

	Boston		Other First District Banks	
	June 30, 1956	% Change from June 30, 1955	June 30, 1956	% Change from June 30, 1955
Total Assets	2,824,747	+ 3.9	5,139,749	+ 5.4
Total reserves, cash and balances	**656,128**	**+15.4**	**1,003,834**	**+11.5**
Total investments	**681,778**	**−19.6**	**1,834,042**	**− 4.6**
U.S. securities	523,407	−18.0	1,352,488	− 7.7
Other securities	158,371	−24.4	481,554	+ 3.4
Total loans and discounts	**1,437,856**	**+15.5**	**2,217,315**	**+12.9**
Commercial and industrial loans	987,946	*+19.2	847,041	+14.3
Real estate loans	123,710	*+ 8.3	614,032	+10.1
Other loans to individuals	281,644	+18.1	649,712	+12.4
All other loans	76,952	−15.9	143,151	+22.3
Reserve for bad debt losses, etc.	32,396	+13.7	36,621	+22.3
All other assets	**48,985**	**−14.7**	**84,558**	**− 6.0**
Total Liabilities and Capital Accounts	2,824,747	+ 3.9	5,139,749	+ 5.4
Liabilities	**2,546,413**	**+ 3.8**	**4,721,167**	**+ 5.5**
Demand deposits	2,251,037	+ 3.1	3,461,988	+ 7.2
Time deposits	229,159	+10.3	1,194,463	+ 0.7
All other liabilities	66,217	+ 7.4	64,716	+13.2
Capital accounts	**278,334**	**+ 4.9**	**418,582**	**+ 4.2**

*After allowance for reclassification of real estate loans.

Over-all Monetary Developments

Aggregate demands for investible funds were extraordinarily heavy in the first half of 1956 although total production declined slightly. Supplies of funds did not keep pace with demands and money rates in the short-term market reached the highest levels since the early 1930's while longer-term rates climbed close to the postwar highs of the spring of 1953.

Strongest demands in the capital market were made by businesses and state and local governments. States, municipalities, and special authorities sought money for a variety of purposes including highways and toll roads, schools, and housing and redevelopment projects. Their security offerings in the first half of 1956 were about ten per cent larger than a year ago but below the record levels in the first half of 1954.

Businesses required funds for capital outlays, inventories and tax payments. Plant and equipment expenditures were the highest ever recorded. Inventories rose at a rate only slightly below that in the second half of 1955. Finally, corporate income tax payments were large due to high profit levels in 1955 and advancement of tax payment schedules.

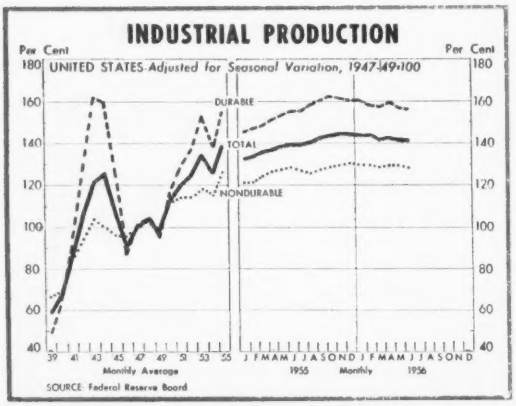
Corporate offerings and placements of securities for new capital were higher than in the first half of any other postwar year and about 15 per cent above a year ago. Businesses also relied heavily on the banking system for funds, with the $2.9 billion increase in commercial and industrial loans being the largest amount recorded in any December to June period.

Two sectors which were exceptions with respect to funds demands were the Federal Government and consumers. While the U. S. Treasury generally has a cash surplus in the first half year, in 1956 the surplus amounted to $12 billion, about double that of a year ago, and Government debt was reduced. Consumer short- and intermediate-term credit increased about $800 million compared with about three times that amount a year ago. Mortgage credit demands of consumers, however, declined little.

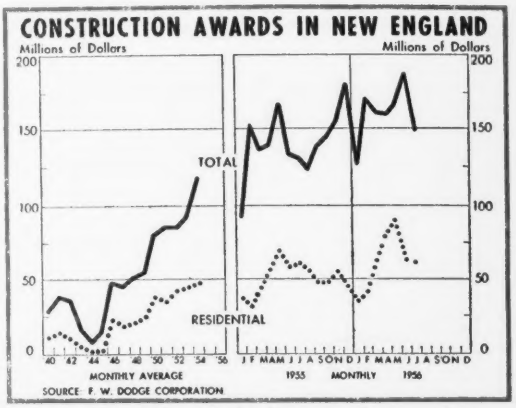
Federal Reserve policy continued to be one of restraint during the first six months of 1956. The level of net borrowed reserves—member bank borrowings from F. R. Banks less excess reserves—rose from January to April. Also in April, discount rates at Federal Reserve Banks were raised one-half percentage point at Minneapolis and San Francisco and ¼ percentage point elsewhere to reach 3 and 2¾ per cent respectively. Net borrowed reserves declined somewhat in May, however, and even more in June.

Interest rates remained high compared to postwar levels. Money market rates declined early in the year, rose to highs in April and May, and then declined again. Bank rates on prime business loans were raised to 3¾ per cent in April from the 3½ per cent rate which had prevailed since last October.

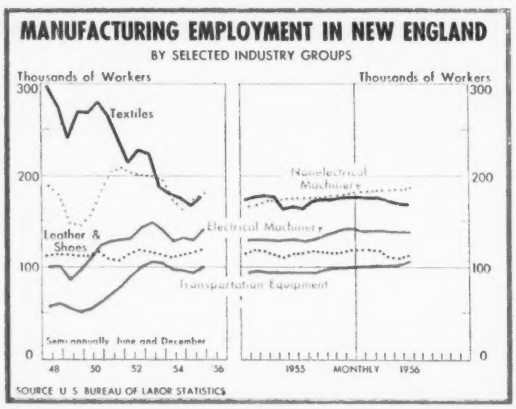
Business Conditions



Industrial production declined slightly in June. Durables fell from spring levels but were somewhat above a year ago. Nondurables were down from May but equaled the May 1955 level.

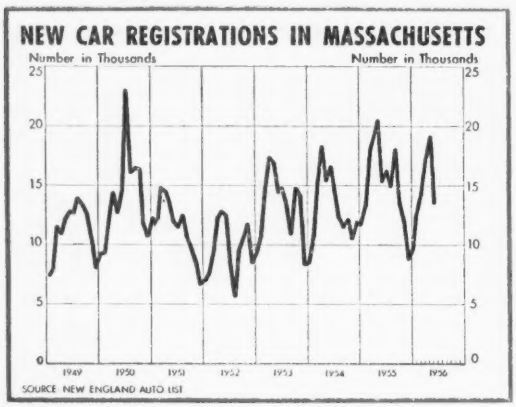


The value of New England construction awards in July was 15 per cent above the year-earlier level but below June 1956. Awards in 1956 were 18 per cent above last year's seven-month total.

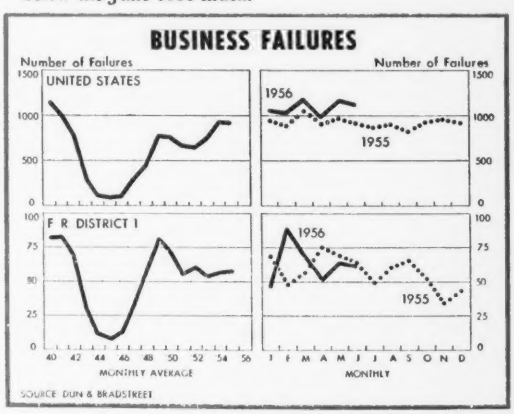


Employment in New England's manufacturing firms increased in June. Largest gains over the year were in nonelectrical and electrical machinery and transportation equipment.

Wholesale prices fell off slightly in June, but were 3.5 per cent above the year-ago level, with industrial prices up five per cent and farm prices only 0.7 per cent below the June 1955 index.



Massachusetts new car registrations in June were 11 per cent below the year-ago level. For the first half of 1956 they were almost 12 per cent below the six-month level of 1955.



For the first half of 1956 business failures in New England increased slightly, while nationally they rose 15 per cent. Failures dropped both in the region and in the nation between May and June.